APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,193	06/05/2006	Alexander Golitschek Edler Von Elbwart	L7725.06101	9530

52989 7590 01/02/2009		
Dickinson Wright PLLC		
James E. Ledbetter, Esq.		
International Square		
1875 Eye Street, N.W., Suite 1200		
Washington, DC 20006		

EXAMINER
RIZK, SAMIR WADIE

ART UNIT	PAPER NUMBER
2112	

MAIL DATE	DELIVERY MODE
01/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/565,193	GOLITSCHEK EDLER VON ELBWART ET AL.
	Examiner	Art Unit
	SAM RIZK	2112

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 January 2006</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-24</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>20 January 2006</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>1/20/2006, 3/21/2006</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTIONS

- Claims 1-24 have been submitted for examination

- Claims 1-24 have been rejected

Specification

1. The specification is objected to because no subtitles included in the specification.

This makes it difficult to search specific section(s) for detailed description.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

2. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by El-

Gamal et al. US publication no. 2001/0034868 (Hereinafter Gamal).

3. In regard to claim 1, Gamal teaches:

- (Original) A method of encoding data in a code block comprising an information

bit sequence in a communication device of a communication system comprising

the steps of:

- distributing the bits of the information bit sequence of a first coding branch having

  a length k into a first plurality of n subsets of information bits, each subset

  forming a code block segment having a length k1 ..... kn respectively;

  (Figure 5, ref. (206), (208) & (210) and section [0027] in Gamal)

- supplementing at least one code block segment with information bits which have

  also been distributed to at least one different code block segment, such that the

  sum of the lengths k1 ..... kn of the code block segments is larger than the code

  block length k; and

  (section [0040] in Gamal)

- encoding the code block segments individually using at least one encoding

  method.

  (Figure 5, ref. (218), (220) & (222) in Gamal)

4.   In regard to claim 2, Gamal teaches:

- (Original) The method according to claim 1, further comprising the step of

  encoding the information bit sequence in a second coding branch individually and

  separate from the encoding operations of the first plurality of code block

  segments.

  (Figure 5, x(t) (202) and the code block segments (206), (208) & (210) in Gamal)

5.   In regard to claim 3, Gamal teaches:

- (Original) The method according to claim 2, wherein the step of encoding the

  information bit sequence is performed in a second coding branch arranged in

  parallel to a first coding branch, wherein the distribution and encoding operations

on the first plurality of code block segments are performed independently of the

encoding operations in the second coding branch.

(Figure 5, x(t) (202) and the code block segments (206), (208) & (210) and

constituent encoders (218), (220) & (222) in Gamal)

6.   In regard to claim 4, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the individual

    encoding steps of the code blocks and/or the code block segments are

    performed in a time diversity manner.

    (section [0040] in Gamal)

7.   In regard to claim 5, Gamal teaches:

- (Currently Amended) The method according to claim , further comprising the

    additional step of buffering at least a portion of either the code block or the code

    block segments prior to the encoding step.

    (Figure 5, ref. (502) in Gamal)

8.   In regard to claim 6, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the to individual

    encoding of the code block segments or code blocks is performed using different

    encoding methods.

    (Figure 5 the independent constituent encoders (218), (220) & (222) in Gamal)

9.   In regard to claim 7, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the encoding steps use at least one of convolutional codes, trellis codes, turbo codes, Reed-Solomon codes, parity check codes.

  (section [0004], line 3 in Gamal)

10. In regard to claim 8, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the encoding step of the individually encoded code block segments or code blocks is performed in a plurality of parallel coding subbranches.

  (Figure 5 the independent constituent encoders (218), (220) & (222) in Gamal)

11. In regard to claim 9, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the information bits of the individually encoded code block segments are at least partly identical to each other to form an information overlap.

  (section [0040] in Gamal)

12. In regard to claim 10, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the segmentation of the code blocks is performed into code block segments of equal length.

  (section [0045] in Gamal)

13. In regard to claim 11, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the length of the code blocks and/or code block segments is varied by zero-stuffing or partial repetition of the information bit sequence.

  (section [0045] in Gamal)

14.   In regard to claim 12, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the bits of the code blocks and code block segments are combined after encoding to form a code word corresponding to the original information bit sequence before encoding.

  (Figure 1, (ref. (110) in Gamal)

15.   In regard to claim13, Gamal teaches;

- (Currently Amended) The method according to claim 1, further comprising the step of interleaving the information bits of one or more coding branches and/or subbranches.

  (Figure 5, ref (502) in Gamal)

16.   In regard to claim 14, Gamal teaches:

- (Original) The method according to claim 13, wherein the interleaving step uses different interleaving patterns for different coding branches or subbranches.

  (Figure 2, ref (12), (214) & (216) in Gamal)

17.   In regard to claim 15, Gamal teaches:

- (Currently Amended) The method according claim 13, -wherein the step of interleaving the information bits is performed after separation and prior to the encoding step into code block segments.

  (Figure 5 in Gamal)

18. In regard to claim 16, Gamal teaches:

- (Currently Amended) The method according to claim 1, further comprising the step of adjusting the length of the code block prior to its separation into code block segments.

  (section [0045] in Gamal)

19. In regard to claim 17, Gamal teaches:

- (Original) The method according to claim 16, wherein the adjustment is obtained by appending termination bits to the information bit sequence in at least one coding branch or subcoding branch.

  (section [0045] in Gamal)

20. in regard to claim 18, Gamal teaches:

- (Currently Amended) The method according to claim 1, further comprising the step of including an error detection code inserted before the encoding step.

  (Figure 2, ref (12), (214) & (216) and figure 3 in Gamal)

21. In regard to claim 19, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the distribution is performed by periodically switching the input bit sequence to at least one of the

subbranches and repeating the application of bits of the input bit sequence to

another subbranch.

(Figure 6, "Bit Selector's" in Gamal)

22.   In regard to claim 20, Gamal teaches:

- (Currently Amended) The method according to claim 1, wherein the distribution is

  performed using a transition vector or matrix which signifies which input bit shall

  be distributed to which subbranch.

  (Figure 6, "Bit Selector's" in Gamal)

23.   in regard to claim 21, Gamal teaches:

- (Currently Amended) The method according to claim[1, wherein the distribution

  is performed using a puncturing vector or matrix that determines which bits can

  pass through and which bits are removed for a particular subbranch.

  (Figure 7, step (712) in Gamal)

24.   in regard to claim 22, Gamal teaches:

- (Currently Amended) The method according to claim 1, further comprising the

  step of choosing which part of the information bit sequence has higher priority

  than other parts of said sequence and selecting this part of the information bit

  sequence for the supplementing step, wherein the information bits are distributed

  to different code block segments.

  (Figure 7, step (704) in Gamal)

25.   Claim 23 is rejected for the same reasons as per claim 1.

26.   In regard to claim 24, Gamal teaches:

- (Original) A communication device of a wireless communication system
  comprising an encoder according to claim 23.

  (Figure 1 in Gamal)

Conclusion

27.   The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure.

-    Rub et al. US publication no. 2002/0014980 teaches a method for
     encoding of large data words at high code rate.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Sam Rizk whose telephone number is (571) 272-
8191. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax
phone number for the organization where this application or proceeding is
assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

only. For more information about PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the

Electronics Business Center (EBC) at 866-217-9197 (toll-free)

/Sam Rizk/

Examiner, Art Unit 2112